

PROJECT TITLE : A P L  
PROJECT LEADER : R. TOIMIL  
PERIOD COVERED : January 7th - January 25th 1980  
WRITTEN BY : R. TOIMIL

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During January 1980, the card-indices of APL programs has been increased.  
These programs enables us to realize graphical and statistic analyses, either  
on values taken in a card-indice, or on values introduced manually in the terminal.

THE FOLLOWING PROGRAMS HAVE BEEN DEVELOPED :

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- 1) HISTOGRAM
- 2) HISTO, PLOT (Histogram with graph of frequency)
- 3) REG, PLOT
- 4) "SAISIE"
- 5) CORR, MUL
- 6) TEST, F
- 7) "ENLEVE" (Take away)

1) HISTOGRAM

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This program enables us to calculate the standard deviation (S), the average,  
the minimum and the maximum of a sample, the number and the center of classes,  
the number and the percent per classes (See enclosure 1).

2) HISTO, PLOT

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This program enables us to illustrate the histogram. In addition, it draws the  
average, the graph between the center of each class and the limits at 2'S of  
each side of the average (95 % of the values) (See enclosure 2).

3) REG, PLOT

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This program enables us to illustrate the relation between two given parameters.  
It calculates the function  $y=f(x)$  asked by the operator on the basis of the  
programs of regressions (See monthly report of October 1979). On the basis of  
this function, it calculates the coefficient of correlation ( $R^2$ ) and the  
associated standard deviation (S, Y, X) (See enclosure 3).

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4) "SAISIE"

Under the "REG, PLOT" program, it enables us to write down a title on the graph.

5) CORR, MUL

Under the "REG, PLOT" and "REGRESSION" programs, it enables us to calculate the multiple regression of a sample composed of several variables (i.e. polynomial correlation of nth degree).

6) TEST, F

This program enables us to calculate the F test of a correlation.

7) "ENLEVE" (Take away)

It enables us to take away from a matrix of values all these which are not necessary for analysis.

EXPLOITATION OF THE APL CARD-INDICE

Some work on the TLA card-indice has been realized for the Leaf Department PME in collaboration with Miss L. Joseph.  
The results of this work will be presented on the 29th of February 1980.



R. Toimil

28/01/1980/RAT/cap

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A

3.050	2.980	1.590	1.990	3.020	3.020	3.110	2.350	1.640	1.340	1.670	1.850	1.970	2.440	3.770	3.770	4.430	3.770	3.830	4.260
3.830	3.840	4.260	4.260	3.720	3.810	3.750	4.540	3.280	3.590	1.870	3.170	3.170	3.290	3.070	3.600	1.460	4.030	2.450	
2.630	1.510	1.770	2.720	2.720	2.720	3.180	2.980	3.260	3.220	3.440	2.590	3.520	2.890	3.290	3.480	2.590	3.500	3.440	
3.630	2.760	2.700	3.250	3.630	3.750	3.590	3.560	3.300	3.790	1.810	1.510	3.130	3.120	3.350	1.800	2.580	2.330	2.270	
2.040	2.420	2.850	2.850	2.390	2.140	2.700	2.910	2.830	2.980	2.520	2.810	3.160	3.230	3.120	2.150	2.920	2.210	2.680	
2.730	2.470	2.070	3.010	3.100	3.340	3.360	3.500	2.940	3.620	2.150	2.050	2.740	2.860	2.680	2.990	2.500	2.120	2.720	
2.830	2.900	2.950	2.550	3.060	3.250	3.500	3.620	3.470	3.510	3.900	3.900	3.900	4.040	4.000	2.910	4.010	4.100	4.160	
4.410	4.810	4.360	4.300	4.440															

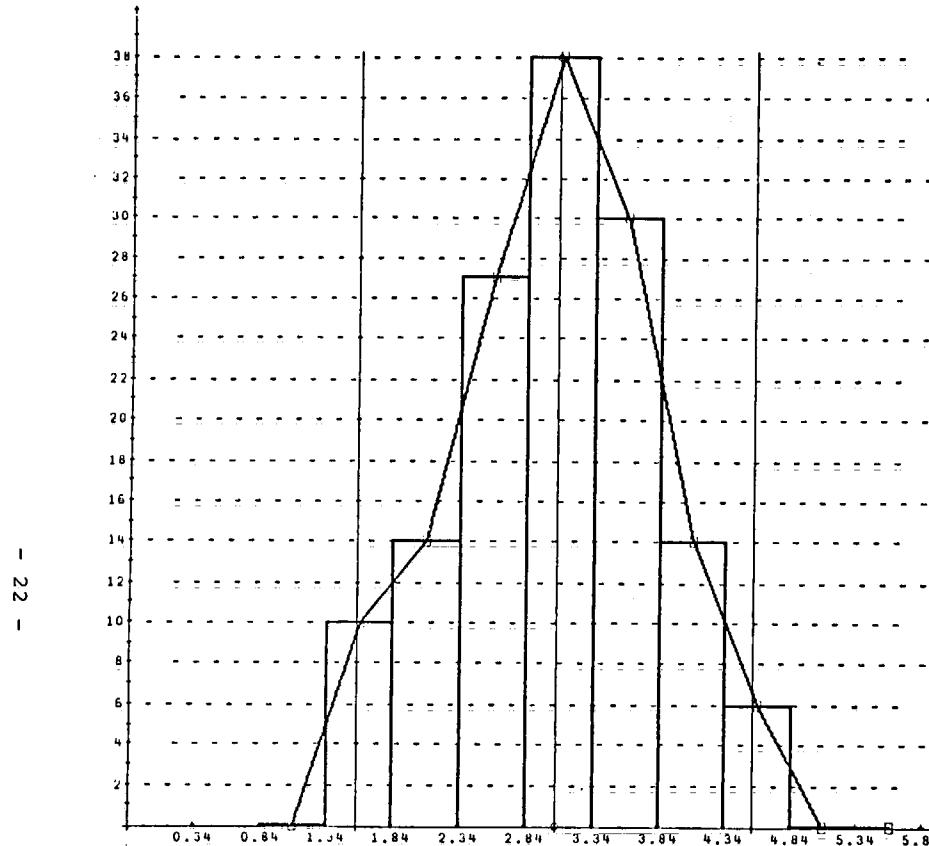
HISTOGRAMME A  
DONNEZ LA LARGEUR DES CLASSES

5  
 NBR. DE CLASSES : 7  
 LARGEUR DES CLASSES : 0.5  
 MIN. DE L'ECHANTILLON : 1.34  
 MAX. DE L'ECHANTILLON : 4.81  
 NBR. D'OBSERVATIONS : 139  
 ETENDUE DE L'ECHANTILLON : 3.47  
 MOYENNE DE L'ECHANTILLON : 3.06  
 ECART-TYPE (S) : 0.748

21  
 CENTRE DES CLASSES : 1.090 1.590 2.090 2.590 3.090 3.590 4.090 4.590 5.090 5.590  
 NBR. PAR CLASSE : .000 10.000 14.000 27.000 38.000 30.000 14.000 6.000 .000 .000  
 \*/\* PAR CLASSE : .000 7.194 10.072 19.424 27.338 21.583 10.072 4.317 .000 .000

A REPRESENTE LE T.A. EN MILLIGRAMMES PAR CIGARETTE POUR LES LOTS FLUE-CURED BASIC

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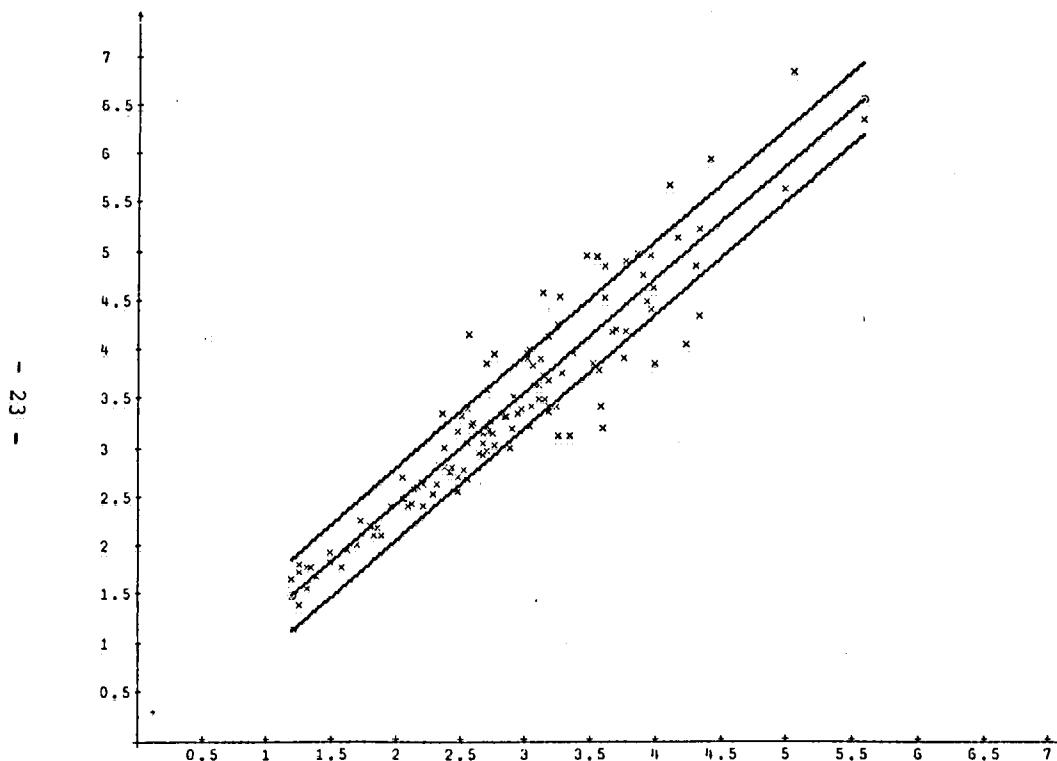


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CENTRE DES CLAS	:	1.090	1.590	2.090	2.590	3.090	3.590	4.090	4.590	5.090	5.590
NBR. PAR CLASSE	:	.000	10.000	14.000	27.000	38.000	30.000	14.000	6.000	.000	.000
* / * PAR CLASSE	:	.000	7.194	10.077	19.424	27.038	21.583	10.072	4.317	.000	.000

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RELATION ENTRE LES CRITERES 85 ET 106  
X REPRESENTE : SN POUR DES LOTS FLUE-CURED BASIC  
Y REPRESENTE : SN POUR DES LOTS FLUE-CURED BASIC  
L'UNITE DE X EST: MILLIGRAMME PAR CIGARETTE  
L'UNITE DE Y EST: MILLIGRAMME PAR GRAMME DE TABAC BRULE



$YF(X)$   $Y: 1.15 \times X + 0.126$   
 $R^2$  CARRE  $R^2: 0.878$   
ECART-TYPE LIE  $SYX: 0.373$   
NR. D'OBSERVATIONS  $NR: 139$

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